**Curriculum Vitae**

## Elihu “Hugh” Hoagland IV, AA, BA



**Education**

A.A. Tomlinson College, 1981

B.A. KY Wesleyan, 1983

Graduate Work SBTS Louisville, KY, 1984, 1994

Post Bacc and Graduate Work, University of Louisville Pre-Medical 1985-1987

**Continuing Education:**

Rutger’s University Medical School Respiratory Protection Seminar 1995

Attended & taught at Clemson University Protective Clothing Continuing Education Conference 1998-2001

Attended or taught at NC State University Protective Clothing 2000-2003

American Society of Safety Engineers 1997- Present

National Safety Council 1996-Present

Edison Electric Institute – Safety & Industrial Health Committee

Annual IEEE Electrical Safety Workshop 1999-Present

Research in electric arc 1994-Present over 15,000 electric arc tests

**Professional Service Positions:**

American Society for Testing Materials Member since 1995

F-18 Electrical Protective Equipment for Workers

* Co-Chair, ASTM F-18 Rainwear Taskforce
* Co-Chair, ASTM F-18 Eye Protection Taskforce
* Secretary F-18 Protective Clothing Testing Taskforce
* Co-Chair Insulating Rubber Protective Sheeting Taskforce

F-23 Protective Clothing Committee Secretary

* Member F-23 Petrochemical Clothing Standard Taskforce
* Chair Molten Metal Standard Taskforce

D-13 Textiles Committee Member

National Fire Protection Association Member since 1997

Flash Fire Clothing for Industrial Workers Standards 2112 & 2113 Member 1999-

2000

Canadian Standards Association Member since 2001

Z96 High Visibility Clothing for Workers voting member

Z462 Electrical Safety in the Workplace (NFPA 70E Adaptation)

American National Standards Institute (ISEA Committee Member for High Visibility Clothing)

ANSI 107 Voting Member

ISSA (International Social Security Association [Europe]) Working group on Work Clothing

and the Electric Arc Voting Member

IEC (International Electrical Committee) Live Working Group TC78

IEEE (Institute of Electronic and Electrical Engineers) Full Member since 1997

P1584 Standard Electric Arc Hazard Assessment Committee Member

PCIC (Petrochemical Industrial Conference) Presenter and Member

Rural Electric Power Systems Conference Presenter and Member

International Control & Power Systems Conference Presenter and attendee

Electrical Safety Workshop Presenter and attendee

**Curriculum Vitae / Elihu “Hugh” Hoagland, IV (continued)**

**Professional Experience**

*e-Hazard.com – Sr. Managing Partner 2004-Present*

Offers training and arc hazard analysis to customers for electric arc under NFPA 70E, IEEE 1584 and OSHA 1910.269.

*ArcWear.com –President 1997-Present*

Offers consulting to electric utilities and clothing, textile and PPE manufacturers on clothing and materials used in electric arc. Offers hazard assessment services through engineering group to utilities and large electrical customers. Trained over 20,000 line workers and management working for electric utilities and larger electrical users including: Dow Chemical, Dupont, GM, Toyota, 3M, Akzo Nobel, Rohm & Haas, Cintas, Aramark, Workrite, Bulwark, Square D, The Southern Company, Duke Power, LG&E, ConEd, ComEd, BG&E, Constellation Energy, PP&L, PECO, Pepco, Allegheny Power and many others. Professional consultant to Iron Horse and ERI Safety Videos for their arc training videos.

*NASCO Industries, Inc. – R&D Director 1997-2000*

Inventor of Electric Arc Resistant raingear and materials and arc resistant face shield material. Directed testing and material development for use in electric arc, chemical and flash fire. Developed most of the arc flash suits for industry leaders.

*Louisville Gas & Electric Company – Technical Safety Consultant 1994-1998*

Technical Writer and Safety Consultant began researching electric arc in 1994 and performed LG&E Testing and consulted with electric utilities.

*Safety Kleen –Chemist 1986-1992*

Specialization in calorimetry, gas chromatography and qualitative analysis

**Publications**

“Arc Flash Protection”, Hugh Hoagland and Zarheer Jooma, *ee Publishers magazine*, November 2009

“Arc Flash Protection: The NFPA 70E-2004 Standard Clearly States Ways to Protect Workers from Arc Flash Dangers”, Hugh Hoagland, Contractor Tools and Supplies Magazine, September 2005

“A Far Better 70E”, Hugh Hoagland, Bill Shinn, Victoria Reed, Occupational Health and Safety Magazine August, 2004

“Protecting Workers, Saving Lives: OSHA Apparel Standard, 1994 to Today”, by Hugh Hoagland and Victoria Reed, Electrical Energy Magazine, May-June 2004

Appeared in and helped edit a 15 minute PBS special on arc resistant clothing aired on satellite for Bulwark Protective Clothing, Feb. 2003.

“Facing Up to the Arc Challenge” by Hugh Hoagland, Bruce Sannar, Kent Givens, John Winn, and Luciana Galo, *Occupational Health and Safety Magazine*, June 2003

“Looks to Live For”, Hugh Hoagland, *Electrical Contracting and Engineering News*, January 2003

”Falling to Pieces”, Hugh Hoagland *Utility Safety Magazine*, June 2002

”Minimizing Burn Injury: Electric Arc Hazard Assessment and Personnel Protection”, By Richard L. Doughty, Thomas E. Neal, Genevieve M. Laverty and Hugh Hoagland, *IEEE Industry Applications Magazine*, May/June 2002 Issue, pp. 18-25.

“Myths and Facts on Complying with NFPA 70E's Clothing Requirements” By Hugh Hoagland *Electrical Contracting & Engineering News*, February, 2002.

“Electric Arc Hazards and Clothing” By Hugh Hoagland, Dr. Tom Neal and Stephen Cress, *Electric Energy*, Fall 2001

*Electric Arc Hazard Assessment And Personnel Protection*, IEEE IAS Conference Paper Rome

2001, Richard L. Doughty, Dr. Thomas E. Neal, Dr. Genevieve M. Laverty, Hugh Hoagland

**Curriculum Vitae / Elihu “Hugh” Hoagland, IV (continued)**

“STOMPING OUT Step Potential” Hugh Hoagland, *Utility Safety*, February, 2001.

“A History of Protective Clothing”, Hugh Hoagland & Claude Maurice, *Utility Safety*, October 2000.

“The Right Stuff”, Hugh Hoagland, *Occupational Health & Safety*, October 2000

“Minimize Arc-Burn Incidents”, Hugh Hoagland, *Electrical Contracting & Engineering Magazine*, June 1998

“Well Suited for WET WEATHER”, Hugh Hoagland, *Utility Safety*, April 2000

“Face shields: When you're face to face with arcing hazards”, Hugh Hoagland, *Electrical World*,

June 1998

“Using Rainwear as Switching Jackets: A Reasonable Solution for Electric Arc Exposure”, Hugh

Hoagland and Bill Morrow, *IEEE IAS Transactions*, 1997

“Take the Guesswork Out of Arc Protective Clothing”, Hugh Hoagland, *Electrical World*, December 1996

“Winter Wear: It Must be Warm but Must it be Arc Protective?”, Hugh Hoagland, *Electrical World*,

August 1997

**E-Contact:**

hugh@e-hazard.com